

Please type a plus (+) sign in this box →

+

PTO/SB/05 (4/98)

Approved for use through 09/30/2000. OMB 0651-0032

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

# UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new non-provisional applications under 37 C.F.R. § 1.53(B))

Attorney Docket No.	R290.12-0029
First Inventor or Application Identifier	Chang-Dong Feng et al.
Title	FLOW-THROUGH CONDUCTIVITY SENSOR
Express Mail Label No.	EV178025507US

**APPLICATION ELEMENTS**  
See MPEP chapter 600 concerning utility patent application contents.

Address To:

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

1. ☒ \*Fee Transmittal Form e.g., PTO/SB17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant Claims small entity status
3. ☒ Specification [Total Sheets **18**]  
(preferred arrangement set forth below)  
- Descriptive title of the Invention)  
- Cross References to Related Applications  
- Statement Regarding Fed sponsored R & D  
- Reference to Microfiche Appendix  
- Background of the Invention  
- Brief Summary of the Invention  
- Brief Description of the Drawings (if filed)  
- Detailed Description  
- Claim(s)  
- Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. § 113) [Total Sheets **8**]
5. Oath or Declaration [Total Sheets **3**]  
a. ☒ Newly executed (original or copy)  
b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))  
(for continuation/divisional with Box 18 completed)  
i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§1.63(d)(2) and 1.33(b).
6. ☒ Application Data Sheet. See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (If applicable, all necessary)  
a. ☐ Computer Readable Copy  
b. Specification Sequence Listing on:  
i. ☐ CD-ROM or CD-R (2 Copies); or  
ii. ☐ Paper  
c. ☐ Statement verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 C.F.R. § 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO – 1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Nonpublication Request Under 35 USC 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent
17. ☒ Other: Checks in the amount of \$40.00 and \$892.00

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation –in part (CIP)

of prior application No: \_\_\_\_\_ /

Prior application information:

Examiner \_\_\_\_\_

Group/Art Unit: \_\_\_\_\_

**FOR CONTINUATION or DIVISIONAL APPS only:** The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

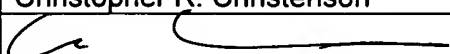
## 17. CORRESPONDENCE

☐ Customer Number or Bar Code Label


(Insert Customer No. or Attach bar code label here)

or ☒ Correspondence address below

Name	Christopher R. Christenson				
	WESTMAN CHAMPLIN & KELLY				
Address	Suite 1600 – International Centre				
	900 South Second Avenue				
City	Minneapolis	State	MN	Zip Code	55402-3319
Country	USA	Telephone	(612) 334-3222	Fax	(612) 334-3312

Name (Print/type)	Christopher R. Christenson	Registration No. (Attorney/Agent)	42,413
Signature		Date	12/12/03

FEE TRANSMITTAL		Complete if Known																																																																																																																																															
		Application No.																																																																																																																																															
		Filing Date	December 12, 2003																																																																																																																																														
		First Named Inventor	Chang-Dong Feng et al.																																																																																																																																														
		Title	FLOW-THROUGH CONDUCTIVITY SENSOR																																																																																																																																														
		Group Art Unit																																																																																																																																															
		Examiner Name																																																																																																																																															
Total Amount of Payment \$ 892		Atty. Docket Number	R290.12-0029																																																																																																																																														
METHOD OF PAYMENT (Check One)		FEE CALCULATION (Continued)																																																																																																																																															
1. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any additional fee required under 37 C.F.R. § 1.16 and 1.17, including any petition fee, and credit any over payments to Deposit Account No. <u>23-1123</u> . Westman, Champlin & Kelly, P.A.		<b>3. ADDITIONAL FEES</b>  <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> <th rowspan="2">Fee Paid</th> </tr> <tr> <th>Fee</th> <th>Fee</th> <th>Fee</th> <th>Fee</th> </tr> <tr> <th>Code</th> <th>(\$)</th> <th>Code</th> <th>(\$)</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1051</td> <td>130</td> <td>2051</td> <td>65</td> <td>Surcharge - Late filing fee or oath</td> <td></td> </tr> <tr> <td>1052</td> <td>50</td> <td>2052</td> <td>25</td> <td>Surcharge - Late provisional Filing Fee or cover sheet</td> <td></td> </tr> <tr> <td>1053</td> <td>130</td> <td>1053</td> <td>130</td> <td>Non-English specification</td> <td></td> </tr> <tr> <td>1812</td> <td>2,520</td> <td>1812</td> <td>2,520</td> <td>For Filing a Request for Reexamination. (ex parte)</td> <td></td> </tr> <tr> <td>1251</td> <td>110</td> <td>2251</td> <td>55</td> <td>Extension for reply within first month</td> <td></td> </tr> <tr> <td>1252</td> <td>420</td> <td>2252</td> <td>210</td> <td>Extension for reply within second month</td> <td></td> </tr> <tr> <td>1253</td> <td>950</td> <td>2253</td> <td>475</td> <td>Extension for reply within third month</td> <td></td> </tr> <tr> <td>1254</td> <td>1,480</td> <td>2254</td> <td>740</td> <td>Extension for reply within fourth month</td> <td></td> </tr> <tr> <td>1255</td> <td>2,010</td> <td>2255</td> <td>1,005</td> <td>Extension for reply within fifth month</td> <td></td> </tr> <tr> <td>1402</td> <td>330</td> <td>2402</td> <td>165</td> <td>Filing a brief in support of an appeal</td> <td></td> </tr> <tr> <td>1403</td> <td>290</td> <td>2403</td> <td>145</td> <td>Request for oral hearing</td> <td></td> </tr> <tr> <td>1814</td> <td>110</td> <td>2814</td> <td>55</td> <td>Terminal Disclaimer Fee</td> <td></td> </tr> <tr> <td>1452</td> <td>110</td> <td>2452</td> <td>55</td> <td>Petition to Revive - unavoidable</td> <td></td> </tr> <tr> <td>1453</td> <td>1,330</td> <td>2453</td> <td>665</td> <td>Petition to Revive - unintentional</td> <td></td> </tr> <tr> <td>1501</td> <td>1,330</td> <td>2501</td> <td>665</td> <td>Utility/Reissue issue fee (inc. advance copies)</td> <td></td> </tr> <tr> <td>1502</td> <td>480</td> <td>2502</td> <td>240</td> <td>Design issue fee (inc. advance copies)</td> <td></td> </tr> <tr> <td>1460</td> <td>130</td> <td>1460</td> <td>130</td> <td>Petitions to the Commissioner</td> <td></td> </tr> <tr> <td>1807</td> <td>50</td> <td>1807</td> <td>50</td> <td>Petitions related to provisional applications</td> <td></td> </tr> <tr> <td>1806</td> <td>180</td> <td>1806</td> <td>180</td> <td>Submission of Information Disclosure Statement</td> <td></td> </tr> <tr> <td>8021</td> <td>40</td> <td>8021</td> <td>40</td> <td>Recording each patent assignment per property (times number of properties)</td> <td></td> </tr> <tr> <td colspan="6">Other Fee (specify) _____</td> </tr> </tbody> </table>		Large Entity		Small Entity		Fee Description	Fee Paid	Fee	Fee	Fee	Fee	Code	(\$)	Code	(\$)			1051	130	2051	65	Surcharge - Late filing fee or oath		1052	50	2052	25	Surcharge - Late provisional Filing Fee or cover sheet		1053	130	1053	130	Non-English specification		1812	2,520	1812	2,520	For Filing a Request for Reexamination. (ex parte)		1251	110	2251	55	Extension for reply within first month		1252	420	2252	210	Extension for reply within second month		1253	950	2253	475	Extension for reply within third month		1254	1,480	2254	740	Extension for reply within fourth month		1255	2,010	2255	1,005	Extension for reply within fifth month		1402	330	2402	165	Filing a brief in support of an appeal		1403	290	2403	145	Request for oral hearing		1814	110	2814	55	Terminal Disclaimer Fee		1452	110	2452	55	Petition to Revive - unavoidable		1453	1,330	2453	665	Petition to Revive - unintentional		1501	1,330	2501	665	Utility/Reissue issue fee (inc. advance copies)		1502	480	2502	240	Design issue fee (inc. advance copies)		1460	130	1460	130	Petitions to the Commissioner		1807	50	1807	50	Petitions related to provisional applications		1806	180	1806	180	Submission of Information Disclosure Statement		8021	40	8021	40	Recording each patent assignment per property (times number of properties)		Other Fee (specify) _____					
Large Entity				Small Entity		Fee Description	Fee Paid																																																																																																																																										
Fee	Fee	Fee	Fee																																																																																																																																														
Code	(\$)	Code	(\$)																																																																																																																																														
1051	130	2051	65	Surcharge - Late filing fee or oath																																																																																																																																													
1052	50	2052	25	Surcharge - Late provisional Filing Fee or cover sheet																																																																																																																																													
1053	130	1053	130	Non-English specification																																																																																																																																													
1812	2,520	1812	2,520	For Filing a Request for Reexamination. (ex parte)																																																																																																																																													
1251	110	2251	55	Extension for reply within first month																																																																																																																																													
1252	420	2252	210	Extension for reply within second month																																																																																																																																													
1253	950	2253	475	Extension for reply within third month																																																																																																																																													
1254	1,480	2254	740	Extension for reply within fourth month																																																																																																																																													
1255	2,010	2255	1,005	Extension for reply within fifth month																																																																																																																																													
1402	330	2402	165	Filing a brief in support of an appeal																																																																																																																																													
1403	290	2403	145	Request for oral hearing																																																																																																																																													
1814	110	2814	55	Terminal Disclaimer Fee																																																																																																																																													
1452	110	2452	55	Petition to Revive - unavoidable																																																																																																																																													
1453	1,330	2453	665	Petition to Revive - unintentional																																																																																																																																													
1501	1,330	2501	665	Utility/Reissue issue fee (inc. advance copies)																																																																																																																																													
1502	480	2502	240	Design issue fee (inc. advance copies)																																																																																																																																													
1460	130	1460	130	Petitions to the Commissioner																																																																																																																																													
1807	50	1807	50	Petitions related to provisional applications																																																																																																																																													
1806	180	1806	180	Submission of Information Disclosure Statement																																																																																																																																													
8021	40	8021	40	Recording each patent assignment per property (times number of properties)																																																																																																																																													
Other Fee (specify) _____																																																																																																																																																	
2. <input checked="" type="checkbox"/> Check Enclosed																																																																																																																																																	
FEE CALCULATION																																																																																																																																																	
<b>1. BASIC FILING FEE</b>  <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Fee Description</th> </tr> <tr> <th>Fee</th> <th>Fee</th> <th>Fee</th> <th>Fee</th> </tr> <tr> <th>Code</th> <th>(\$)</th> <th>Code</th> <th>(\$)</th> <th></th> </tr> </thead> <tbody> <tr> <td>1001</td> <td>770</td> <td>2001</td> <td>385</td> <td><input checked="" type="checkbox"/> Utility Filing Fee</td> </tr> <tr> <td>1002</td> <td>340</td> <td>2002</td> <td>170</td> <td><input type="checkbox"/> Design Filing Fee</td> </tr> <tr> <td>1004</td> <td>770</td> <td>2004</td> <td>385</td> <td><input type="checkbox"/> Reissue Filing Fee</td> </tr> <tr> <td>1005</td> <td>160</td> <td>2005</td> <td>80</td> <td><input type="checkbox"/> Prov. Filing Fee</td> </tr> <tr> <td colspan="5" style="text-align: right;"><b>Subtotal (1) \$ 770</b></td> </tr> </tbody> </table>		Large Entity		Small Entity		Fee Description	Fee	Fee	Fee	Fee	Code	(\$)	Code	(\$)		1001	770	2001	385	<input checked="" type="checkbox"/> Utility Filing Fee	1002	340	2002	170	<input type="checkbox"/> Design Filing Fee	1004	770	2004	385	<input type="checkbox"/> Reissue Filing Fee	1005	160	2005	80	<input type="checkbox"/> Prov. Filing Fee	<b>Subtotal (1) \$ 770</b>																																																																																																													
Large Entity		Small Entity		Fee Description																																																																																																																																													
Fee	Fee	Fee	Fee																																																																																																																																														
Code	(\$)	Code	(\$)																																																																																																																																														
1001	770	2001	385	<input checked="" type="checkbox"/> Utility Filing Fee																																																																																																																																													
1002	340	2002	170	<input type="checkbox"/> Design Filing Fee																																																																																																																																													
1004	770	2004	385	<input type="checkbox"/> Reissue Filing Fee																																																																																																																																													
1005	160	2005	80	<input type="checkbox"/> Prov. Filing Fee																																																																																																																																													
<b>Subtotal (1) \$ 770</b>																																																																																																																																																	
<b>2. EXTRA CLAIM FEES</b>  <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Number Claims</th> <th>Prior**</th> <th>Extra</th> <th>Fee from Below</th> <th>Fee Paid</th> </tr> </thead> <tbody> <tr> <td><b>Total</b></td> <td><b>22</b></td> <td><b>20</b></td> <td><b>2</b></td> <td><b>18</b></td> <td><b>36</b></td> </tr> <tr> <td><b>Indep.</b></td> <td><b>4</b></td> <td><b>3</b></td> <td><b>1</b></td> <td><b>86</b></td> <td><b>86</b></td> </tr> </tbody> </table> <p>Multiple Dependent Claims</p> <p>** Insert 3 and 20, or number previously paid if greater; Reissue see below</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Large Entity</th> <th colspan="2">Small Entity</th> <th rowspan="2">Description</th> </tr> <tr> <th>Fee</th> <th>Fee</th> <th>Fee</th> <th>Fee</th> </tr> <tr> <th>Code</th> <th>(\$)</th> <th>Code</th> <th>(\$)</th> <th></th> </tr> </thead> <tbody> <tr> <td>1202</td> <td>18</td> <td>2202</td> <td>9</td> <td>Claims in excess of 20</td> </tr> <tr> <td>1201</td> <td>86</td> <td>2201</td> <td>43</td> <td>Independent claims in excess of 3</td> </tr> <tr> <td>1203</td> <td>290</td> <td>2203</td> <td>145</td> <td>Multiple Dependent Claims</td> </tr> <tr> <td>1204</td> <td>86</td> <td>2204</td> <td>43</td> <td>Reissue Independent Claims over Original Patent</td> </tr> <tr> <td>1205</td> <td>18</td> <td>2205</td> <td>9</td> <td>Reissue claims in excess of 20 and over original patent</td> </tr> </tbody> </table>			Number Claims	Prior**	Extra	Fee from Below	Fee Paid	<b>Total</b>	<b>22</b>	<b>20</b>	<b>2</b>	<b>18</b>	<b>36</b>	<b>Indep.</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>86</b>	<b>86</b>	Large Entity		Small Entity		Description	Fee	Fee	Fee	Fee	Code	(\$)	Code	(\$)		1202	18	2202	9	Claims in excess of 20	1201	86	2201	43	Independent claims in excess of 3	1203	290	2203	145	Multiple Dependent Claims	1204	86	2204	43	Reissue Independent Claims over Original Patent	1205	18	2205	9	Reissue claims in excess of 20 and over original patent																																																																																							
	Number Claims	Prior**	Extra	Fee from Below	Fee Paid																																																																																																																																												
<b>Total</b>	<b>22</b>	<b>20</b>	<b>2</b>	<b>18</b>	<b>36</b>																																																																																																																																												
<b>Indep.</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>86</b>	<b>86</b>																																																																																																																																												
Large Entity		Small Entity		Description																																																																																																																																													
Fee	Fee	Fee	Fee																																																																																																																																														
Code	(\$)	Code	(\$)																																																																																																																																														
1202	18	2202	9	Claims in excess of 20																																																																																																																																													
1201	86	2201	43	Independent claims in excess of 3																																																																																																																																													
1203	290	2203	145	Multiple Dependent Claims																																																																																																																																													
1204	86	2204	43	Reissue Independent Claims over Original Patent																																																																																																																																													
1205	18	2205	9	Reissue claims in excess of 20 and over original patent																																																																																																																																													
<b>Subtotal (2) \$ 122</b>		<b>Subtotal (3) \$</b>																																																																																																																																															

Signature   
 (Christopher R. Christensen)  
 Date 12-12-03

Reg. No. 42,413

Deposit Account No. 23-1123